

Applicants: Wagner, et al.
Serial No.: 10/004,099
Filing Date: October 31, 2001
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IN THE CLAIMS:

1. (Currently Amended) A sensor arrangement for application to at least one data item, comprising:

at least one sensitive element connected by way of sensor electronic circuitry having a storage arrangement with an input/output port, a line arrangement having at least three lines, by means of which the sensor arrangement may be connected with an external electrical or electronic device, two lines being adapted for use as power supply lines and at least one third line being adapted for the transmission of sensor signals to the electrical device, and by way of an external parametrization ~~means~~ device, able to be connected with the at least one sensor line, parametrization signals may be supplied to the sensor electronic circuitry in order to parametrize the sensor arrangement by the storage of parametrization values.

~~The sensor arrangement as set forth in claim 1, and~~ wherein the parametrization device is adapted for the production of a transfer signal, by which the instantaneously present data item is taken over as at least one switching or threshold value in the storage arrangement, the parametrization device preferably being designed in the form of a teach in or short circuit switch.

2. (Cancelled)

3. (Original) The sensor arrangement as set forth in claim 1, wherein the parametrization device is in the form of an input module of the electronic device or as a

separate parametrization device.

4. (Original) The sensor arrangement as set forth in claim 3, wherein the parametrization device is provided with a display and with operating controls.
5. (Original) The sensor arrangement as set forth in claim 3, wherein the parametrization device is adapted for the transmission of parametrization signals and more particularly for the setting of switching points, sensor and/or switching functions, sensor and/or switching characteristics, switching times, sensor response thresholds, hysteresis factors or window functions.
6. (Original) The sensor arrangement as set forth in claim 1, wherein the sensor signals are digital signals in the form of at least two different signal levels.
7. (Original) The sensor arrangement as set forth in claim 3, wherein the parametrization signals may be produced in the form of signal sequences and may be modulated onto the respectively present sensor signals.
8. (Original) The sensor arrangement as set forth in claim 7, wherein the signal level of the modulated parametrization signals is so much smaller than the sensor signals that they are negligible for the detection of the sensor signal levels.

9. (Original) The sensor arrangement as set forth in claim 3, wherein for parametrization a set parametrization protocol is utilized alternatingly changing over to one of two directions.
10. (Original) The sensor arrangement as set forth in claim 9, wherein the parametrization protocol includes one start bit able to be checked by the sensor electronic circuitry, means being provided for holding the instantaneous sensor signal for a set detection time.
11. (Original) The sensor arrangement as set forth in claim 9, wherein the sensor electronic circuitry includes means for holding the instantaneously existing sensor signal for a predetermined time during parametrization, such predetermined time being larger than a transmission cycle of the parametrization protocol.
12. (New) A sensor arrangement for application to at least one data item, comprising:
at least one sensitive element connected by way of sensor electronic circuitry having a storage arrangement with an input/output port, a line arrangement having at least three lines, by means of which the sensor arrangement may be connected with an external electrical or electronic device, two lines being adapted for use as power supply lines and at least one third line being adapted for the transmission of sensor signals to the electrical device, and by way of an external parametrization device, able to be connected with the at least one sensor line, parametrization signals may be supplied to the sensor electronic circuitry in order to

parametrize the sensor arrangement by the storage of parametrization values, and wherein the sensor signals are digital signals in the form of at least two different signal levels.

13. (New) The sensor arrangement as set forth in claim 12, wherein the parametrization device is adapted for the production of a transfer signal, by which the instantaneously present data item is taken over as at least one switching or threshold value in the storage arrangement, the parametrization means preferably being designed in the form of a teach in or short circuit switch.

14. (New) The sensor arrangement as set forth in claim 12, wherein the parametrization device is in the form of an input module of the electronic device or as a separate parametrization device.

15. (New) The sensor arrangement as set forth in claim 14, wherein the parametrization device is provided with a display and with operating controls.

16. (New) The sensor arrangement as set forth in claim 14, wherein the parametrization device is adapted for the transmission of parametrization signals and more particularly for the setting of switching points, sensor and/or switching functions, sensor and/or switching characteristics, switching times, sensor response thresholds, hysteresis factors or window functions.

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17. (New) The sensor arrangement as set forth in claim 14, wherein the parametrization signals may be produced in the form of signal sequences and may be modulated onto the respectively present sensor signals.

18. (Original) The sensor arrangement as set forth in claim 17, wherein the signal level of the modulated parametrization signals is so much smaller than the sensor signals that they are negligible for the detection of the sensor signal levels.

19. (Original) The sensor arrangement as set forth in claim 14, wherein for parametrization a set parametrization protocol is utilized alternatingly changing over to one of two directions.

20. (Original) The sensor arrangement as set forth in claim 19, wherein the parametrization protocol includes one start bit able to be checked by the sensor electronic circuitry, means being provided for holding the instantaneous sensor signal for a set detection time.

21. (Original) The sensor arrangement as set forth in claim 19, wherein the sensor electronic circuitry includes means for holding the instantaneously existing sensor signal for a predetermined time during parametrization, such predetermined time being larger than a transmission cycle of the parametrization protocol.

22. (New) A sensor arrangement for application to at least one data item, comprising:
at least one sensitive element connected by way of sensor electronic circuitry having a storage arrangement with an input/output port, a line arrangement having at least three lines, by means of which the sensor arrangement may be connected with an external electrical or electronic device, two lines being adapted for use as power supply lines and at least one third line being adapted for the transmission of sensor signals to the electrical device, and by way of an external parametrization device, able to be connected with the at least one sensor line, parametrization signals may be supplied to the sensor electronic circuitry in order to parametrize the sensor arrangement by the storage of parametrization values, and wherein the parametrization device is in the form of an input module of the electronic device or as a separate parametrization device, and the parametrization signals are produced in the form of signal sequences and modulated onto the respectively present sensor signals.

23. (New) The sensor arrangement as set forth in claim 22, wherein the signal level of the modulated parametrization signals is so much smaller than the sensor signals that they are negligible for the detection of the sensor signal levels.

24. (New) A sensor arrangement for application to at least one data item, comprising:
at least one sensitive element connected by way of sensor electronic circuitry having a storage arrangement with an input/output port, a line arrangement having at least three lines, by means of which the sensor arrangement may be connected with an external electrical or electronic device, two lines being adapted for use as power supply lines and at least one third

line being adapted for the transmission of sensor signals to the electrical device, and by way of an external parametrization device, able to be connected with the at least one sensor line, parametrization signals may be supplied to the sensor electronic circuitry in order to parametrize the sensor arrangement by the storage of parametrization values, and wherein the parametrization device is in the form of an input module of the electronic device or as a separate parametrization device, and for parametrization a set parametrization protocol is utilized alternatingly changing over to one of two directions.

25. (New) The sensor arrangement as set forth in claim 24, wherein the parametrization protocol includes one start bit able to be checked by the sensor electronic circuitry, means being provided for holding the instantaneous sensor signal for a set detection time.

26. (New) The sensor arrangement as set forth in claim 24, wherein the sensor electronic circuitry includes means for holding the instantaneously existing sensor signal for a predetermined time during parametrization, such predetermined time being larger than a transmission cycle of the parametrization protocol.